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BEFORE THE BOARD OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH

LIVING RIVERS, Petitioner, v. DIVISION OF OIL, GAS AND MINING, Respondent, U S OIL SANDS INC. Intervenor/Respondent.	**USOS'S RESPONSES TO LIVING RIVERS' AND THE DIVISION'S OBJECTIONS TO THE PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW, AND FINAL ORDER** Docket No. 2010-027 Cause No. M/047/0090 A

As directed by the Board of Oil, Gas and Mining (the "Board"), on January 25, 2013, U S Oil Sands Inc. ("USOS") submitted to counsel for Living Rivers and the Division of Oil, Gas and Mining (the "Division") proposed Findings of Fact, Conclusions of Law, and Final Order ("Proposed Order") in the above-captioned matter. Pursuant to Utah Admin. Code R641-109-100, Living Rivers and the Division each filed objections to certain paragraphs in the Proposed

Order. USOS submits this response to Living Rivers' and the Division's objections. Each objected-to paragraph is copied, followed by USOS's response to the objection.

PARAGRAPH 10

> 10. An initial hearing was held in this matter on February 23, 2011, and a final hearing was held on December 5, 2012. In the interim, Living Rivers filed with DWQ a challenge to a determination by DWQ's Executive Secretary that USOS's PR Spring Mine will have a *de minimis* actual or potential effect on ground water quality, such that USOS need not obtain a UPDES ground water discharge permit for its project. Based upon a stipulation filed by the parties, the Board issued a May 12, 2011 Order to continue the hearing in this matter until after DWQ resolved Living Rivers' challenge. The matter before DWQ was the subject of a two-day evidentiary hearing before Administrative Law Judge Sandra K. Allen, who, on August 28, 2012, issued a Recommended Order denying Living Rivers' challenge and affirming the Executive Secretary's determination. The Recommended Order was approved by the Utah Board of Water Quality during an October 24, 2012 meeting and through a November 1, 2012 Order.

The Division suggests that the first sentence of paragraph 10 be changed to read "The hearing of the matter commenced on February 23, 2011 and testimony was presented by the Division and Living Rivers, however, there was not sufficient time to complete hearing of the case and so the hearing was continued." (Division's Objection at 1.) The language that the Division suggests is substantially the same as the language in the Proposed Order. If the Board chooses to adopt the Division's suggested language, the phrase "to December 5, 2012" should be added at the end of the Division's suggested sentence.

PARAGRAPH 11

> 11. On September 18, 2012, Living Rivers and USOS entered into, and filed with the Board, a Stipulated Motion Regarding Motion for October 24, 2012 Hearing and for Pre-Hearing Conference, in which Living Rivers agreed and moved to voluntarily dismiss with prejudice the claims and issues in its RAA that were not resolved by the Utah Water Quality Board.

Living Rivers argues that this paragraph mischaracterizes the September 18, 2012 Stipulation because "the September 18th Stipulation was not tied to, and did not directly reference, issues resolved by the Utah Water Quality Board." (Living Rivers' Objection at 2.) Living Rivers' objection lacks merit. Paragraph 11 accurately describes the September 18th Stipulation.

The September 18th Stipulation, at Paragraph 7, states that "[t]he only claims and issues included in Living Rivers' RAA that are ***not resolved in the Recommended Order*** are ...," and it proceeds to list the claims in Living Rivers' RAA unrelated to ground water. (Emphasis added.) The referenced "Recommend Order" is the Memorandum and Findings of Fact, Conclusions of Law, and Recommended Order from ALJ Sandra Allen, dated August 28, 2012, which was fully adopted by the Water Quality Board on November 1, 2012. In Paragraph 8 of the September 18th Stipulation, Living Rivers "stipulate[d] to voluntarily dismiss with prejudice the claims and issues described above in Paragraph 7," which were the claims and issues "not resolved in the Recommended Order," adopted by the Water Quality Board.

Accordingly, Paragraph 11 of the Proposed Order is accurate. In the September 18th Stipulation, Paragraphs 7 and 8, Living Rivers agreed and moved to voluntarily dismiss with prejudice the claims and issues in its RAA that were not resolved by the Utah Water Quality Board.

The Division asserts that the Stipulation's date is September 19, 2012, rather than September 18, 2012. (Division Objection at 2.) The Stipulation was executed on September 18, 2012, and filed on September 19, 2012. To avoid any confusion, USOS suggests that the first sentence of Paragraph 11 be modified to read, "On September 18, 2012, Living Rivers and

USOS entered into a Stipulated Motion Regarding Motion for October 24, 2012 Hearing and for Pre-Hearing Conference (filed with the Board on September 19, 2012), in which ...."

PARAGRAPH 16

> 16. The parties agreed in the November, 2012, Stipulation that only the Division would be allowed to present evidence in addition to that contained within the DWQ Evidentiary Record.

The Division suggests that the words "would be allowed" be replaced with "chose." (Division's Objection at 2.) Although Paragraph 16 accurately summarizes the November, 2012 Stipulation, the Division's concern may be obviated by deleting the phrase "be allowed to" from the text of Paragraph 16.

PARAGRAPH 23

> 23. According to the evidence before the Board, "ground water" may reasonably be defined as subsurface water in the zone of saturation. The "zone of saturation," according to evidence before the Board, means "[t]he zone in which the functional permeable rocks are saturated with water under hydrostatic pressure. Water in the zone of saturation will flow into a well, and is called ground water." DWQ Ex. 312. This is the only definition of "the zone of saturation" offered as evidence in this matter. The zone of saturation where ground water occurs is an "aquifer."

The Division argues that the finding in Paragraph 23 "goes beyond the minute entry" and asks that the finding be redrafted. (Division's Objection at 2.) USOS disagrees. The Board's January 10, 2013, Memorandum Decision states:

> Even if the Board were to accept Living Rivers' invitation to use the "groundwater" definitions from the oil and gas rules or coal rules, however, the Board finds that the NOI's description would still meet the requirements of Utah Admin. Code R647-4-106.8 and 109.1. The Board notes that the oil and gas program definition of "groundwater," like the DWQ definition, employs the similar term "zone of saturation" without further defining that phrase, while the coal program definition employs the similar term "saturated." *See* Utah Admin. Code R648-1-1 (oil and gas rules); Utah Admin. Code R645-100-200 (coal rules). The Board concludes that the U.S. Geological Survey definition of "zone of

> saturation" relied upon by DWQ in construing its "groundwater" definition would be an appropriate definition to rely upon even if the "groundwater" definitions from the oil and gas or coal programs were used as suggested by Living Rivers.

(Memorandum Decision at 7-8.) Paragraph 23 summarizes portions of this statement and provides context from the evidentiary record.

However, to obviate the Division's concerns, USOS suggests that Paragraph 23 be modified to read:

> The DWQ's definition of "ground water," which the Water Quality Board applied in Living Rivers' DWQ challenge, along with the U.S. Geologic Survey ("USGS") definition of the "zone of saturation" is a reasonable definition. "Ground water" may reasonably be defined as subsurface water in the zone of saturation. (DWQ Ev. Rec. – Ex. 312.) The USGS defines the "zone of saturation" as "[t]he zone in which the functional permeable rocks are saturated with water under hydrostatic pressure. Water in the zone of saturation will flow into a well, and is called ground water." (DWQ Ev. Rec. – Ex. 312 (citation omitted).) This is the only definition of the "zone of saturation" offered in evidence in this matter. The zone of saturation where ground water occurs is an "aquifer." (DWQ Ev. Rec. – Hrg. Tr. 48-49, 248).

PARAGRAPH 35

> 35. Evidence of professional inspections in and near the project area was presented. A DWQ monitoring team visited the project area to look for signs of ground water, such as seeps or springs, and found none. Professional geologist Gerald Park has extensive personal experience at the site. He has searched for signs of ground water at the site ever since he started going there in 2005, and he has never found any. The professional geologist who testified on behalf of Living Rivers, Elliot Lips, also visited the site, and he reported no sign of any ground water based on his visit.

Living Rivers argues that the last sentence should be removed because it allegedly lacks evidentiary support. (Living Rivers' Objection at 2.) Paragraph 35 is well-supported by the evidence, including evidence that Living Rivers itself presented. During the DWQ Hearing, Mr. Lips testified that he visited the PR Spring mine site and "walked around the affected and

adjacent area." (DWQ Ev. Rec. – Hrg. Tr. at 291.) Also, Mr. Lips' Prepared Direct Testimony includes the following question and answer:

> Q. HAVE YOU INSPECTED THE SITE OF THE PROPOSED PR SPRING MINE?
>
> A. Yes, I conducted a one-day reconnaissance of the proposed mine site and surrounding area on August 19, 2010.

(DWQ Ev. Rec. Ex. 202 at 5, lines 10-12.) Mr. Lips also testified that nowhere in any testimony he provided did he "recite any personal observation of [his] as to the existence of ground water in the relevant area." (DWQ Ev. Rec. – Hrg. Tr. at 270.) Accordingly, the finding that Mr. Lips "reported no sign of any ground water based on his visit" is accurate.

The ALJ who presided over the DWQ hearing came to the same conclusion. In her Recommended Order, adopted in full by the Water Quality Board, the ALJ found, "The professional geologist who testified on behalf of Living Rivers, Elliot Lips, also visited the site, and he reported no sign of any ground water based on his visit." (Recommended Order at 33, ¶ 23.)

PARAGRAPH 39

> 39. Figure 7 of the NOI indicates with four green dots "seeps" near the mine site. Seeps do not necessarily evidence ground water. The most persuasive evidence presented regarding these "seeps" was the testimony of professional geologist Gerald Park, which was based upon his seven years of personal observations and experience at and near the site. According to Mr. Park's personal observations, the "seeps" represent water runoff from precipitation events and are unrelated to ground water. (Hrg. Tr: 381.)

Living Rivers objects to the characterization of Mr. Park's testimony as "the most persuasive evidence" presented regarding the "seeps" identified in Figure 7 of the NOI. (Living Rivers' Objection at 2.) Mr. Park testified that these "seeps" are simply residual surface moisture from snowmelt or precipitation events. (DWQ Ev. Rec. – Hrg. Tr. at 378-83.) Mr.

Park's testimony is the most persuasive testimony regarding the "seeps" because he is a licensed professional geologist who testified from his many years of personal experience with the site and adjacent areas, including the areas where the "seeps" are located. (DWQ Ev. Rec. – Hrg. Tr. at 377-78, 394.) No other witness at the hearing had any first hand knowledge of the "seeps."

The ALJ who presided over the DWQ hearing, and who was able to judge first hand the credibility of the witnesses, agrees. In the Recommended Order she prepared for the Water Quality Board, the ALJ described Mr. Park's testimony as "the most persuasive evidence presented regarding the 'seeps.'" (Recommended Order at 34, ¶ 25.)

PARAGRAPH 40

> 40. In his testimony during the DWQ matter, Mr. Novak did not admit that there is evidence of shallow ground water at the site of the PR Spring Mine. Rather, he said that he could rule out the presence of monitorable quantities of ground water at the site, but he could not rule out the presence of smaller quantities of ground water. Other knowledgeable witnesses, however, could and did provide evidence that rules out the presence of smaller quantities of ground water, including Mr. Herbert, Robert Bayer, and Gerald Park.

The Division objects to Paragraph 40, and Living Rivers joins in the Division's objection. (Division's Objection at 2; Living Rivers' Objection at 2.) The Division claims that Paragraph 40 is argument regarding testimony in the DWQ hearing. (Division's Objection at 2.) USOS disagrees – the language of Paragraph 41 is not argument. It is an accurate summary of some of the testimony regarding the absence of shallow ground water in the area of the PR Spring mine. (DWQ Ev. Rec. – Hrg. Tr. at 101-02, 104, 173-74, 217-20, 350-52, 378, 384-85.) To alleviate the Division's concerns, a sentence may be added to the beginning of Paragraph 40 that states, "The preponderance of the evidence in the record indicates that shallow ground water does not exist in the project area."

The Board should not adopt the language the Division suggests regarding "small amounts of ground water near seeps." (Division's Objection at 2.) It is unclear what "small amounts of ground water" are the subject of the Division's suggested language. Regardless, there is no evidence of "small amounts of ground water near seeps" at or near the PR Spring mine site. The only "seeps" in question are represented by four green dots near the outlined project site on Figure 7 of the NOI. The evidence, including Mr. Park's testimony based on years of personal observation, indicates that such "seeps" are not related to ground water but are instead associated with snow runoff or other precipitation.

PARAGRAPH 41

> 41. In the DWQ matter, Living Rivers presented the testimony of Dr. William Johnson, who opined that residual d-limonene in the tailings from USOS's operations will make the residual bitumen compounds in the tailings 1,440 times more soluble than they are in their natural state. His testimony fell short, however, as he acknowledged that his solubility and mobility calculations were premised on immediate entry of the byproduct into groundwater, which was not proven. When queried on the likelihood of the processed tailings ever coming into contact with ground water, Dr. Johnson acknowledged that his calculations were assuming a saturated system, which was not proven, and that he could not speak as to the likelihood of contact of the mixture with surface water or ground water as he did not evaluate the hydrogeology of the site. (Johnson April Tr: 6-77.)

The Division objects to Paragraph 41, and Living Rivers joins in the Division's objection. (Division's Objection at 2; Living Rivers' Objection at 2.) The Division claims that Paragraph 41 is argument regarding testimony in the DWQ hearing. (Division's Objection at 2.) The language of Paragraph 41 is not argument. It is an accurate summary of some of the testimony regarding whether residual d-limonene in the tailings will impact ground water. (DWQ Ev. Rec. – 4/20/12 Johnson Depo. at 29, 76-77.) However, to obviate the Division's concern, USOS proposes adding a sentence to the beginning of Paragraph 41 that states, "The preponderance of

the evidence in the record indicates that residual d-limonene in the tailings will not impact ground water."

PARAGRAPH 42

> 42. The record does not show that the leachability tests that were conducted were fatally flawed due to violations of testing protocols. On this point, Living Rivers did not present any evidence which would cast doubt on the certification from the lab as to the usefulness of the data.

Living Rivers argues that this paragraph is argumentative and irrelevant. (Living Rivers' Objection at 2.) Paragraph 42 is not argumentative – it is an accurate summary of the evidentiary record. The evidentiary record contains a certification from the lab that performed the tests stating that the results were sufficiently reliable for their intended purpose. (DWQ Ev. Rec. – Ex. 313.) The record contains no evidence from Living Rivers contradicting that certification. Therefore, the statement in Paragraph 42 is simply a summary of undisputed facts in the record.

Living Rivers' assertion that the language in Paragraph 42 is irrelevant also is in error. The sufficiency of the analysis conducted on the tailings prior to approval of the NOI is relevant to the question of whether the Division satisfied Utah Code Ann. R647-4-106, 109, and 110. The undisputed facts addressed in Paragraph 42 support the Board's determination that the Division satisfied these requirements.

PARAGRAPH 45

> 45. With respect to the d-limonene to be used in USOS's process, 99% of the material will be recycled, only trace amounts will need to be disposed of, and those trace amounts will readily evaporate.

Living Rivers argues that the characterization of the "amount of d-limonene used within the process [i]s argumentative and unsupported by the evidence before the Board." (Living Rivers' Objection at 2.) Living Rivers' argument is baseless. Paragraph 46 directly quotes the

Board's January 10, 2013 Memorandum Decision. (Memorandum Decision at 9 ("The evidence also indicated that 99% of this material will be recycled, that only trace amounts will remain, and that these trace amounts will evaporate.").) Thus, Living Rivers is really objecting to a finding in the Board's January 10, 2013 Memorandum Decision.

The statement is amply supported in the record. For example, Barclay Cuthbert testified during the DWQ hearing that the concentration of residual d-limonene in the tailings would be between within .2 and .4 percent. (DWQ Ev. Rec. – Hrg. Tr. at 312-13.) Pursuant to the November 26, 2012 Stipulation, this testimony is part of the evidentiary record before this Board.

PARAGRAPH 46

> 46. The Board finds on the basis of the evidence presented, including evidence within the NOI Appendices and the DWQ Evidentiary Record, that d-limonene is not a deleterious material within the meaning of Utah Admin. Code R647-5-110.4.

Living Rivers claims that Paragraph 46 is "unsupported by the evidence before the Board and irrelevant to the Board's decision in this matter." (Living Rivers' Objection at 2.) Paragraph 46, however, directly quotes the Board's January 10, 2013 Memorandum Decision. (Memorandum Decision at 9 ("The Board finds on the basis of the evidence presented, including evidence within the NOI appendices and the DWQ record, that d-limonene is not a deleterious material ...").) Again, Living Rivers is really objecting to an *actual* finding in the Board's Memorandum Decision rather than a *proposed* finding.

Living Rivers' objection is simply in error. In addition to the evidence contained in the NOI, its appendices, and the testimony presented by USOS, which support the statement that d-limonene is not a deleterious material, Living Rivers' own exhibit – an EPA publication regarding d-limonene – states that d-limonene is "generally regarded as safe" as a food additive,

it is biodegradable, it evaporates readily, and it is practically nontoxic to birds and mammals. (DWQ Ev. Rec. – Ex. 204 at 18-20.)

PARAGRAPH 47

> 47. The Division monitors reclamation to ensure that it complies with reclamation plans; and nothing limits this monitoring activity to visual inspections. The Division is able to utilize other monitoring methods when, in the exercise of its professional judgment, it deems other methods necessary. The Division will do so with respect to the PR Spring Mine.

Living Rivers objects to a statement that does not exist in Paragraph 44. Living Rivers argues that "the statement that the Division will conduct other than visual inspections with regard to reclamation at the PR Spring mine [i]s unsupported by the evidence before the Board." (Living Rivers' Objection at 3.) Living Rivers' objection mischaracterizes Paragraph 47. Paragraph 47 does not state that the Division *will* conduct other than visual inspections. It states that "[t]he Division is able to utilize other monitoring methods, when, in the exercise of its professional judgment, it deems other methods necessary. The Division will do so in this case."

Paragraph 47 is the functional equivalent of a statement in the Board's Memorandum Decision. (Memorandum Decision at 9 ("[T]he Division monitors reclamation to ensure that it complies with the reclamation plan, and . . . nothing limits this monitoring activity to visual inspections. The Division is able to utilize other monitoring methods when in the exercise of its professional judgment it deems necessary, and the Board is comfortable that the Division will do so in this case.").) As the Memorandum Decision notes, this factual statement is supported in the record by the testimony of Paul Baker at the December 5, 2012 hearing. (Id.) Thus, rather than a *proposed* finding, Living Rivers' objection is to a finding *already made* by the Board in its January 10, 2013 Memorandum Decision.

Respectfully submitted this 5th day of February, 2013.

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that on this 5th day of February, 2013, a true and correct copy of the foregoing **USOS'S RESPONSES TO LIVING RIVERS' AND THE DIVISION'S OBJECTIONS TO THE PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW, AND FINAL ORDER** was served via e-mail, as follows:

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